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10/076,068	02/15/2002	Takayuki Hattori	401573/SOGA	8657

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EXAMINER	
BARNES, CRYSTAL J	

ART UNIT	PAPER NUMBER
2121	11

DATE MAILED: 05/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PRG

Office Action Summary	Application No.	Applicant(s)	
	10/076,068	HATTORI ET AL.	
	Examiner	Art Unit	
	Crystal J. Barnes	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 April 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-16 and 19* is/are rejected.

7)☒ Claim(s) *6,17 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The following is a Final Office Action in response to Amendment received 07 April 2004. Claims 1, 7, 12 and 17 have been amended. Claim 19 has been added. Claims 1-19 are now pending in this application.

Drawings

2. The proposed drawing changes were received on 07 April 2004. These proposed drawing changes are approved.

Specification

3. The specification amendments were received on 07 April 2004. These corrections are acceptable.

Response to Arguments

4. Applicant's arguments with respect to claims 1-4 and 13 rejected under 35 U.S.C. 102 (a) and claims 8-11 and 15 rejected under 35 U.S.C. 103(a) have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 12 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 1 recites the limitation "the device state" in line 10 and line 5 from the bottom. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 12 recites the limitation "the device state" in line 3. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 17 recites the limitation "the device state" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 1-5, 8-16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,416,471 B1 to Kumar et al. in view of logical reasoning.

As per claim 1, the Kumar et al. reference discloses a state-of-device remote monitoring system comprising: an on-the-spot area including: an electric device; a detector (see column 8 lines 19-30, "sensor band 10") measuring physical and electrical operating characteristics ("vital signs") of said electric device; a first communication signal converter (see column 8 lines 42-46, "transmission circuitry 12" and column 10 lines 5-13, "signal transfer unit 20") for converting detection data ("vital signs") obtained by said detector ("sensor band 10") into communication signals (see column 8 lines 42-46, "digitized signal samples"), and transmitting the communication signals ("digitized signal samples"); and a controller ("signal transfer unit 20"), having a memory (see column 10 lines 20-24, "memory buffer") for storing the detection data ("vital signs") obtained by the detection of said detector ("sensor band 10"), for storing with the detection data ("vital signs") the device state based on a preset detection start program, and outputting the detection data ("vital signs") stored in said memory ("memory buffer") to said first communication signal converter ("transmission circuitry 12", "signal transfer unit 20") based on a preset communication start program that runs in correspondence with storage ("memory buffer") of the detection data ("vital signs"), a management area including: a second communication signal converter (see columns 11-12 lines 63-

2, "base station unit 30") for converting the communication signals ("signals") received from said first communication signal converter ("signal transfer unit 20") into the detection data ("vital signs"); a maintenance tool (see column 28 lines 32-36, "remote monitoring station 50") having a diagnostic/analytic program ("physiological monitoring software") for analyzing the device state from the detection data ("vital signs") converted by said second communication signal converter ("base station unit 30"), and a maintenance database (see column 14 lines 24-28, "server 60") storing data necessary for analysis (see column 28 lines 58-60, "analysis and processing") by said diagnostic/analytic program ("physiological monitoring software") and a diagnosed result (see column 31 lines 39-42, "results"); and a display unit (see column 14 lines 10-14, "normal PC") for displaying the diagnosed result (see column 14 lines 19-23, "display continuous or non-continuous data") obtained by the analysis ("analysis and processing") by said maintenance tool ("remote monitoring station 50").

The Kumar et al. reference does not expressly disclose an electric device.

However, it would have been logically to one of ordinary skill in the art to modify the portable remote patient telemonitoring system by replacing sensors specific to patients with sensors specific to electric devices in order to measure

sensor data applicable to electric devices to provide a portable remote monitoring system for electric devices.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the portable remote patient telemonitoring system taught by the Kumar et al. reference to apply to other industries besides patient care where remote monitoring was essential to provide remote, electronic capture of multiple and continuous data and transmission of this data.

One of ordinary skill in the art would have been motivated to provide remote, electronic capture of multiple and continuous data and transmission of this data in other industries besides patient care where remote monitoring was essential to provide the following benefits: better management with continuous or semi-continuous monitoring, increased volumes of data for more informed diagnoses, the capability to simultaneously capture multiple data, greater speed and simplicity in data handling provided by electronic data capture, simple and easy-to-use technology.

As per claim 2, the Kumar et al. reference discloses further comprising a general purpose network (see column 21 lines 1-7, "communications link 75" and column 26 lines 40-45, "communication link 85") for transmitting the communication

signals ("signals") transmitted from said first communication signal ("signal transfer unit 20") to said second communication signal converter ("base station unit 30", "remote monitoring station 50").

As per claim 3, the Kumar et al. reference discloses said first communication signal converter (see column 8 lines 42-46, "signal transfer unit 20") converts the detection data (see column 8 lines 33-38, "sensor data") into radio signals ("digitized signal samples") and transmits the radio signals ("digitized signal samples"), and said second communication signal converter (see column 13 lines 8-10, "base station") converts the radio signals ("signals") received from said first communication signal converter ("signal transfer unit 20") into the detection data ("accurate temperature reading").

As per claim 4, the Kumar et al. reference discloses said on-the-spot area includes a mobile communication device (see column 10 lines 5-13, "signal transfer unit 20") for transmitting the radio signals (see column 11 lines 44-48, ""radio link") based on the communication signals ("signals") converted by said first communication signal converter ("signal transfer unit 20"), and said general-purpose network (see column 21 lines 1-7, "communications link 75") includes: at least one base station (see column 22 lines 25-28, "base station unit 30") for receiving the

radio signals ("radio link") of said mobile communication device ("signal transfer unit 20") and converting the radio signals ("radio link") into the communication signals ("signals"); and a mobile communication network (see column 26 lines 40-45, "communication link 85") for transferring the communication signals ("signals") converted by said base station ("base station unit 30") to a public line network (see column 11 lines 63-66, "modem and land or cellular telephone line").

As per claim 5, the Kumar et al. reference discloses further comprising a power line (see column 8 lines 33-38, "transmission circuitry 12") for supplying said electric device ("sensor band 10") with electric power ("power") from a power source device ("zinc-air battery pack"); and connecting means for connecting said power line ("transmission circuitry 12"), said controller ("signal transfer unit 20") and said first communication signal converter ("signal transfer unit 20") to each other, said controller ("signal transfer unit 20") transmitting the detection data ("vital signs") to said first communication signal converter ("signal transfer unit 20") via said connecting means and said power line (see column 8 lines 46-49, "back-up wire transmission link").

As per claim 10, the Kumar et al. reference discloses said controller ("signal transfer unit 20") does not include said memory (see columns 20-21 lines 64-2,

"memory buffer 72"), detects a device state ("data") through said detector ("sensor band 10") based on a preset detection start program if a communication route ("communication link 75") between said first communication signal converter ("base station unit 30") and said general-purpose network ("communication link 75") is established, and outputs the detection data ("vital signs") to said first communication signal converter ("base station unit 30") based on a preset communication start program in accordance with the device state ("vital signs, sensor data") detected.

As per claim 11, the Kumar et al. reference discloses said maintenance tool ("remote monitoring unit 50") outputs a state-of-device detection start command (see column 26 lines 60-63, "initiates connection") of the electric device to said controller ("signal transfer unit 20", "base station unit 30") at a predetermined time, and said controller ("signal transfer unit 20", "base station unit 30") executes the detection start program ("monitoring software") based on the state-of-device detection start command ("initiates connection").

As per claim 12, the Kumar et al. reference discloses if said controller ("signal transfer unit 20", "base station unit 30") detects the device state ("vital signs") through said detector ("senor band 10") with a fixed period ("continuous,

non-continuous"), said maintenance tool ("remote monitoring unit 50") outputs to said controller ("signal transfer unit 20", "base station unit 30") a command to change detection period of said detector (see column 13 lines 45-53, "setting times for recording data from auxiliary sensors") in accordance with a diagnosed result ("result") from the detection data ("vital signs") based on a preset program ("programming"), and said controller ("signal transfer unit 20", "base station unit 30") detects the detection data ("vital signs") from said detector ("sensor band 10") with the detection period changed ("setting times for recording data from auxiliary sensors") based on the command ("programming") to change the detection period change ("setting times for recording data from auxiliary sensors").

As per claim 13, the Kumar et al. reference discloses further comprising a mobile communication device ("signal transfer unit 20") for issuing abnormality information (see column 14 lines 55-59, "alarm conditions") upon receiving the abnormality information ("alarm conditions"), wherein said maintenance tool ("remote monitoring unit 50") transmits, if the diagnosed result ("result") from the detection data ("vital signs, sensor data") shows an abnormality ("alarms"), the abnormality information (see column 10 lines 51-54, "displays/alarms") to said mobile communication device ("signal transfer unit 20").

As per claim 14, the Kumar et al. reference discloses said maintenance tool ("remote monitoring unit 50") includes a maintenance procedure database (see column 28 lines 33-40, "server 52") storing maintenance procedure data ("analysis") corresponding to a variety of abnormal states, extracts the maintenance procedure data ("analysis") corresponding to the abnormal information ("event") from said maintenance procedure database ("server 52") if the diagnosed result from the detection data ("vital signs") shows the abnormality, and transmits the extracted maintenance procedure data ("analysis") together with the abnormality information (see column 30 lines 5-13, "warning massage") to said mobile communication device ("signal transfer unit 20").

As per claim 15, the Kumar et al. reference discloses further comprising a user maintenance terminal (see column 14 lines 10-12, "normal PC") connected to said general-purpose network ("modem, telephone line 40") and issuing the data received ("data received") via said general-purpose network ("modem, telephone line 40"), wherein said maintenance tool ("remote maintenance unit 50") is managed by an in-charge-of-maintenance company ("physician or nurse") in charge of monitoring device state ("vital signs") of the electric device and outputting the

diagnosed result ("result") based on said diagnostic/analytic program ("physiological software") to said maintenance terminal ("normal PC").

As per claim 16, the Kumar et al. reference discloses said maintenance tool ("remote monitoring unit 50") includes a device database (see column 28 lines 45-47, "database 110") storing device specifications ("patient data") of a variety of electric devices, and a maintenance procedure database ("database 110") storing maintenance procedure data (see column 12 lines 54-60, "event data") corresponding to a variety of abnormal states ("threshold violations"), and outputs to said maintenance terminal (see column 14 lines 19-23, "remote monitoring unit 50") the device specification ("previously stored data") corresponding to an electric device analyzed and the maintenance procedure data ("view events") corresponding to the diagnosed result ("result") together with the diagnosed result ("warning message") based on said diagnostic/analytic program ("monitoring program").

As per claim 8, the Kumar et al. reference discloses if said on-the-spot area is within an automobile, comprising: a mobile record terminal (see column 10 lines 51-54, "signal transfer unit 20") downloaded with the detection data ("sensor

data") stored in said memory ("memory buffer") by connecting a communication cable disconnectable from and connectable to (see column 10 lines 35-39, "in and out of range") said first communication signal converter ("base station unit 30"); and a mobile communication device ("signal transfer unit 20"), connected to said mobile record terminal ("signal transfer unit 20"), for converting the detection data ("sensor data") downloaded into said mobile record terminal ("signal transfer unit 20") into the radio signals ("radio connection") and transmitting the radio signals ("radio connection"), wherein said general-purpose network ("communications link 75") includes at least one base station ("base station unit 30") for receiving and converting the radio signals ("radio communication") of said mobile communication device ("signal transfer unit 20") into the communication signals ("signals"), and including a mobile communication network ("communications link 85") for transferring the communication signals ("signals") converted by said base station ("base station unit 30") to a public line network ("remote monitoring station 50").

The Kumar et al. reference does not expressly disclose said on-the-spot area is within an automobile.

However, it would have been logically to one of ordinary skill in the art to modify the portable remote patient telemonitoring system by replacing devices specific to patients with devices specific to automobiles in order to provide a portable automobile monitoring system.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the portable remote patient telemonitoring system taught by the Kumar et al. reference to apply to other industries besides patient care where remote monitoring was essential to provide remote, electronic capture of multiple and continuous data and transmission of this data.

One of ordinary skill in the art would have been motivated to provide remote, electronic capture of multiple and continuous data and transmission of this data in other industries besides patient care where remote monitoring was essential to provide the following benefits: better management with continuous or semi-continuous monitoring, increased volumes of data for more informed diagnoses, the capability to simultaneously capture multiple data, greater speed and simplicity in data handling provided by electronic data capture, simple and easy-to-use technology.

As per claim 9, the Kumar et al. references discloses if said on-the-spot area is within an electric car including a battery for supplying electric power, the system comprises: a power source/communication cable ("signal transfer unit 20") disconnectable from and connectable to (see column 10 lines 35-39, "in and out of range") said battery, connected to a power source (see column 10 lines 13-17, "battery operated"); and a power control device (see column 11 lines 1-9, "signal transfer unit 20") for charging said battery with electricity from said power source device ("battery operated") by connecting said power source/communication cable ("signal transfer unit 20") to said battery, downloading the detection data ("sensor data") stored in said memory ("memory buffer"), and transferring the detection data ("sensor data") to said general-purpose network ("communication links 75, 85").

The Kumar et al. reference does not expressly disclose said on-the-spot area is within an electric car including a battery for supplying electric power.

However, it would have been logically to one of ordinary skill in the art to modify the portable remote patient telemonitoring system by replacing devices specific to patients with devices specific to electric cars in order to provide a portable electric car monitoring system.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the portable remote patient telemonitoring system taught by the Kumar et al. reference to apply to other industries besides patient care where remote monitoring was essential to provide remote, electronic capture of multiple and continuous data and transmission of this data.

One of ordinary skill in the art would have been motivated to provide remote, electronic capture of multiple and continuous data and transmission of this data in other industries besides patient care where remote monitoring was essential to provide the following benefits: better management with continuous or semi-continuous monitoring, increased volumes of data for more informed diagnoses, the capability to simultaneously capture multiple data, greater speed and simplicity in data handling provided by electronic data capture, simple and easy-to-use technology.

As per claim 19, the Kumar et al. reference does not expressly disclose the physical and electrical operating characteristics (see column 8 lines 19-24, "vital signs") include temperature ("skin temperature"), vibration ("heartbeat, motion"),

current (see column 9 lines 1-5, "continuous reciprocating current") and voltage of the electrical device.

The Kumar et al. reference does not expressly disclose the physical and electrical operating characteristics include temperature, vibration, current and voltage of the electrical device.

However, it would have been logically to one of ordinary skill in the art to modify the portable remote patient telemonitoring system by replacing sensors specific to patients with sensors specific to electric devices in order to measure sensor data applicable to electric devices to provide a portable remote monitoring system for electric devices.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the portable remote patient telemonitoring system taught by the Kumar et al. reference to apply to other industries besides patient care where remote monitoring was essential to provide remote, electronic capture of multiple and continuous data and transmission of this data.

One of ordinary skill in the art would have been motivated to provide remote, electronic capture of multiple and continuous data and transmission of this data in other industries besides patient care where remote monitoring was

essential to provide the following benefits: better management with continuous or semi-continuous monitoring, increased volumes of data for more informed diagnoses, the capability to simultaneously capture multiple data, greater speed and simplicity in data handling provided by electronic data capture, simple and easy-to-use technology.

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,416,471 B1 to Kumar et al. in view of logical reasoning as applied to claims 1-5, 8-16 and 19 above, and further in view of USPN 5,487,516 to Murata et al.

As per claim 7, the Kumar et al. reference does not expressly disclose when said on-the-spot area is within a train including a train radio device for adjusting a traffic schedule.

The Murata et al. reference discloses when said on-the-spot area is within a train (see column 5 lines 52-57, "train 20") including a train radio device (see column 6 lines 3-35, "radio communication unit 201") for adjusting a traffic schedule ("train schedule"), the detection data (see column 6 lines 34-42, "integrating power, load factor, speed, integrating distance") stored in said memory ("railroad/train data memory unit 20163") are wirelessly (see column 5 lines 61-64,

"radio communication unit 201") transmitted to said second communication signal converter ("radio communication unit 101") from said train radio device ("radio communication unit 201") by use of said train radio device ("radio communication unit 201") as said first communication signal converter ("radio communication unit 201").

However, it would have been logically to one of ordinary skill in the art to modify the portable remote patient telemonitoring system by replacing devices specific to patients with devices specific to trains in order to provide a portable train monitoring system.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the portable remote patient telemonitoring system taught by the Kumar et al. reference with the train control system taught by the Murata et al. reference to provide remote, electronic capture of multiple and continuous data and transmission of this data.

One of ordinary skill in the art would have been motivated to provide remote, electronic capture of multiple and continuous data and transmission of this data for the following benefits: better management with continuous or semi-continuous monitoring, increased volumes of data for more informed analyses, the

capability to simultaneously capture multiple data, greater speed and simplicity in data handling provided by electronic data capture, simple and easy-to-use technology.

Allowable Subject Matter

13. Claims 6, 17 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to communicating remotely in general:

USPN 6,725,179 B1 to Nagase

USPN 6,700,902 B1 to Meyer

USPN 6,678,535 B1 to Narayanaswami

USPN 6,353,313 B1 to Estep et al.

USPN 4,719,616 to Akano

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Crystal J. Barnes whose telephone number is

703.306.5448. The examiner can normally be reached on Monday-Friday alternate Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703.308.3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cjb
25 May 2004

Ramesh Patel 5/26/04
RAMESH PATEL
PRIMARY EXAMINER
For Anthony Knight.